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BHP South Flank is aiming to be one of the world's largest iron ore operations, integrating the latest advances in autonomous-ready fleets, digital connectivity and modular design.

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Established in 1975 – second generation, family owned

• Mobile Line Boring & Machining • Liquid Nitrogen Services & Supply • CNC Machining • Weld Reclamation • General Engineering

CAT REAR DUMP TRUCK STEERING TAPER RECLAMATION & SERVICE EXCHANGE COMPONENTS

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30 **BHP SOUTH FLANK**

A gun at dust suppression

INTERNATIONAL

SINCE 2009, EnviroMist has been successfully developing and installing its own high-energy micro-mist dust suppression systems for underground and above-ground mining operations.

The technology is based purely on water, without any chemical additives.

EnviroMist has collaborated with OEMs, Australian and overseas-based mines and BMEA of University of Wollongong in order to further develop dust suppression technologies.

These are suited to large scale applications such as iron ore or coal underground and surface operations, as well as stockpile discharge conveyors and ROMBINs.

The EnviroMist high-energy micro-mist systems have been installed in several open cut and underground operations, resulting in an immediate and significant reduction in visible dust around the material handling areas.

The solution to this dust problem was the combination of EnviroMist's technologies along with CFD modelling techniques that determined nozzle size, position and operating pressure.

The resulting systems maximise dust capture effectiveness through the control of droplet size, velocity, water consumption and spray angle to suit application specific variables.



EnviroMist uses high-energy micro-mist to maximise the dust capture effectiveness of the spray.

High-energy micro-mist is a key aspect in effective dust capture, as droplets that are similar in size to the dust particles are much more likely to result in droplet-to-particle impact.

Additionally, for the same water consumption, smaller droplet sizes will produce substantially more droplets,

thereby significantly increasing the probability of dust particle capture.

Taking this into account, EnviroMist's nozzles have been developed to produce a finely atomised mist without the need for compressed air.

EnviroMist's latest development, a

powerful misting gun, has been installed on a few new projects around stockpiles and COS discharge conveyors.

These place a high importance on minimising water usage and maximising effectiveness in high cross wind conditions, allowing EnviroMist to showcase the versatility of their systems.



TURN-KEY DUST SUPPRESSION

- Ship Loaders & Unloaders
- Transfer Points & Chutes
- Construction Machinery
- Stockpiles & ROM Bins
- **Crushers & Conveyors**

Mining Machinery

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